

REMARKS

Claims 1-16 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Potter (US 5,262,030). Applicant respectfully traverses the rejection for at least the following reasons.

Initially, Applicant respectfully notes that the copy of Potter presented with the Office Action dated March 5, 2003 was replete with erroneous modifications in both the drawings and the specification. Accordingly, Applicant submits concurrently herewith a “clean” copy of Potter devoid of any annotations, markings, or drawing modifications in order to clarify exactly what is, and what is not, disclosed by Potter.

The Office Action alleges that “[f]rom Figures 10, 11 and Figures 12A and 12B the examiner understands that there are at least one and two groups of coils which will trace a hexagonal pattern and a triangular pattern by connecting the coil by imaginary lines and that each of the coils are selectively energizable as discussed above for energizing whichever magnets or groups of magnets are necessary in order to achieve uniform target utilization.” Applicant respectfully disagrees.

Applicant respectfully submits that Potter provides no teaching or suggestion whatsoever with respect to at least one and two groups of coils which “will trace a hexagonal pattern and a triangular pattern by connecting the coil by imaginary lines and that each of the coils are selectively energizable,” as alleged by the Office Action. In fact, as demonstrated by the “clean” copy of Potter, there are no “imaginary lines” connecting the elements disclosed by Potter, either explicitly or implicitly.

Applicant respectfully asserts that the Office Action's alleged motivation is simply not found in Potter, either explicitly or implicitly. Although Potter generally discloses (col. 3, lines 43-46) "a cathode with two degrees of freedom has the shape of a large rectangle or square and is approximately the size of the pallets used in existing disk sputtering machines," Applicant respectfully asserts that Potter fails to teach or suggest anything regarding a sputtering system including electromagnets formed having different geometrical groups cell patterns. Moreover, although Potter further discloses (col. 7, lines 36-40), in part, "partition the plane 21 into a number of elements, where each element is small relative to the distance to the region where the magnetic field is to be used, and to provide a means for controlling the potential of each element," Applicant respectfully asserts that Potter fails to teach or suggest electromagnets having different geometrical groups cell patterns.

Furthermore, although Potter further discloses (col. 7, lines 28-43, and FIGs. 10 and 11) "the plane 21 partitioned into elements 50 having a square shape" and "[a]nother example consisting of circular elements 50 arranged in a hexagonal pattern," Applicant respectfully asserts that Potter fails to teach or suggest electromagnets having different geometrical groups cell patterns.

The Office Action's alleged motivation to modify Potter to "allows [for] more uniform erosion over the surface of the target" is inapposite to providing a plurality of electromagnets having different geometrical groups cell patterns. In other words, although Potter may teach arranging elements in one of a square or hexagonal pattern, Potter is completely silent with respect to providing "a plurality of electromagnets formed having different geometrical groups

cell patterns on the fixed plate,” as recited by independent claim 1, and hence dependent claims 2-16.

If the Office Action is taking the position that providing electromagnets having different geometrical groups cell patterns is somehow common knowledge in the art, Applicant respectfully submits that, as instructed in MPEP 2144.03A, “[i]t would not be appropriate for the examiner to take official notice of facts without citing a prior art reference where the facts asserted to be well known are not capable of instant and unquestionable demonstration as being well-known,” and, in part, “[i]t is never appropriate to rely solely on ‘common knowledge’ in the art without evidentiary support in the record, as the principle evidence upon which a rejection was based. *Zurko*, 258 F.3d at 1385, 59 USPQ2d at 1697.”

Moreover, “[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).” See MPEP 2143.01. Thus, Applicant respectfully submits that since Potter fails to teach or suggest providing electromagnets having different geometrical groups cell patterns, then Potter fails to provide motivation with which to arrive at the presently claimed invention.

Thus, for at least the above reasons, Applicant respectfully submits that Potter fails to make obvious Applicant’s invention of claims 1-16 under 35 U.S.C. § 103(a), and respectfully requests that the rejection be withdrawn.

CONCLUSION

In view of the foregoing, Applicant respectfully requests reconsideration and the timely allowance of the pending claims. As requested above, should the Examiner feel that there are any issues outstanding after consideration of the response, the Examiner is invited to contact the Applicant's undersigned representative to expedite prosecution.

If there are any other fees due in connection with the re-filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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